1. An actuation system for assisting the operation of a natural heart comprising:

a dome structure configured for being coupled with a ventricular portion of the heart, the dome structure having at least one opening formed therein;

the dome structure, proximate the opening, being configured to interface with at least one of an atrial chamber and a great vessel of the heart; and

one of a stabilizing element and an actuating element being anchored to the dome structure for engaging a portion of the heart.

2. The actuation system of claim 1 wherein the dome structure is formed of a flexible material.

3. The actuation system of claim 1 wherein the dome structure is formed of a generally rigid material.

4. The actuation system of claim 1 further comprising a locking structure positioned internally of at least one of the atria or great vessels, the dome structure configured for interfacing with the locking structure through a wall of one of the atria or great vessels

5. The actuation system of claim 1 further comprising a plurality of openings formed in the dome structure.

6. The actuation system of claim 1 further comprising:

a suture structure positioned internally of at least one of the atria and great vessels; and

sutures spanning a wall of one of the atria and great vessels and anchoring the dome structure with the suture structure.

7. The actuation system of claim 6 wherein the suture structure is an angioplasty ring.

8. The actuation system of claim 1 further comprising a cushion positioned between the dome structure and the heart.

9. A heart-mounted structure for assisting the operation of a natural heart comprising:

a dome structure configured for being coupled a basal surface of a ventricular portion of the heart, the dome structure having at least one opening formed therein; and

the dome structure, proximate the opening, being configured to interface with at least one of an atrial chamber and a great vessel of the heart.

10. The heart-mounted structure of claim 9 wherein the dome structure is formed of a flexible material.

11. The heart-mounted structure of claim 9 wherein the dome structure is formed of a generally rigid material.

12. The heart-mounted structure of claim 9 wherein the dome structure is configured for interfacing, through a wall of one of the atria or great vessels, with a locking structure positioned internally of at least one of the atria or great vessels.

13. The heart-mounted structure of claim 9 further comprising a plurality of openings formed in the dome structure.

14. The heart-mounted structure of claim 9 wherein the dome structure includes an extension section extending therefrom to interface with at least one of the atria and great vessels.

15. The heart-mounted structure of claim 9 further comprising a sleeve for interfacing with at least one of the atria and great vessels, the dome structure holding the sleeve in place when positioned on the heart.

16. The heart-mounted structure of claim 9 wherein the dome structure includes a textured surface for interfacing with a heart surface.

17. The heart-mounted structure of claim 9 further comprising a cushion for positioning between the dome structure and the heart.

18. The heart-mounted structure of claim 17 wherein the cushion is coextensive with the entire dome.

19. The heart-mounted structure of claim 17 wherein the cushion interfaces with an opening in the dome.

20. The heart-mounted structure of claim 17 wherein the cushion is integral with the dome.

21. The heart-mounted structure of claim 9 further comprising a ring structure positioned around the opening in the dome structure.

22. The heart-mounted structure of claim 9 wherein the dome structure includes separated sections for positioning the dome structure proximate the atria or great vessels.

23. The heart-mounted structure of claim 9 further comprising at least one of a stabilizing element and an actuating element, the dome structure configured for interfacing with such an element to anchor the element.

24. The heart-mounted structure of claim 23 wherein the one of a stabilizing element and actuating element are integrally formed with the dome structure.